- Remove the side panel to gain access to the water pressure switch. See *Figure 13*.
- Turn the filter pump on and confirm that the pressure switch closes with a voltmeter.
- If the switch does not close, check that all valves are open to the heater and that there are no restrictions in the line. You may also need to confirm flow rate from your pump as outlined in *Section 5.1, Pump Sizing*.
- Once an operational and correctly sized pressure switch has been confirmed, set the heater control to either POOL or SPA. Heater should start.
- With your fingers, turn the adjustment sprocket very slowly clockwise until the heater goes off.
- Slowly turn the pressure switch adjustment sprocket counterclockwise one-quarter turn. The heater should come back on. See *Figure 13*.

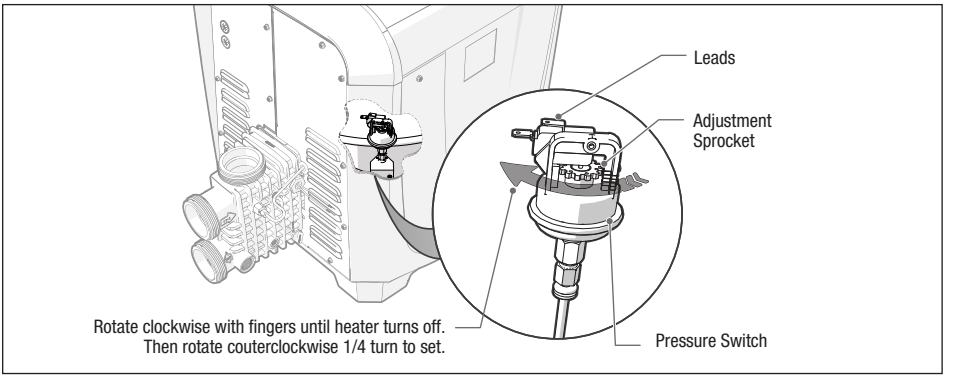


Figure 13. Water Pressure Switch Adjustment

- Check the adjustment by turning the filter pump OFF. The burner should shut off immediately. If it does not, restart the filter pump and repeat the preceding step. Check the adjustment again. If you are still unable to successfully set your water pressure switch please contact your local Jandy distributor or call technical support at 1.800.822.7933. Additional information can be found at www.jandy.com.
- Return the temperature control to the desired temperature.

⚠ CAUTION

The water pressure switch should be adjusted to turn the heater off when the pump is off. Setting the switch to close at too low flow can damage the appliance. Adjust the switch to turn the heater off, not on.

NOTE: It is recommended that a Pressure Release Valve (PRV) be installed prior to taking any of the steps below. Please see *Section 5.5, Pressure Relief Valve Installation* for details.

5.4 Check Valve Installation

When any equipment is located below the surface of the pool or spa, back-siphoning can occur, which can draw water backwards through the circulation system. This can be particularly concerning if chemically treated water is allowed to flow back into equipment such as heaters, filters and pumps. Make sure any chemical feeder or chlorination system outlet lines are downstream of the heater and a positive seal noncorrosive check valve is installed between the sanitation equipment and the heater. Always install a check valve if there is sanitation equipment installed in the system. Do not install any shutoff valve in the piping between the heater outlet and the pool.

⚠ WARNING

A check valve can interfere with the proper operation of certain Suction Vacuum Release System (SVRS) products. To avoid possible entrapment hazard, serious injury, or death, make sure to review the operation/ owners manual of your particular SVRS product before installing the check valve.

5.5 Pressure Relief Valve Installation

A pressure relief valve (PRV) is recommended in all installations, and is mandatory in any installation in which the water flow can be restricted between the heater outlet and the pool/spa. A pressure relief valve may also be required by local codes. Be sure to check any applicable installation codes in your area to determine whether a pressure relief valve is required.

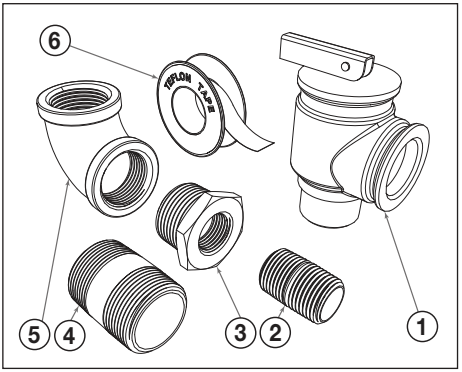
A pressure relief valve is not supplied with the JXi heater. However, Jandy does offer a PRV Kit #R0336101. The following instructions are for use with this kit only. All other equipment installations need to be in accordance with the manufacturers instructions.

The maximum working pressure of this heater is 50 psi. Be sure to take into consideration the maximum allowable pressure of the other components in the system when installing a PRV. Any pressure relief valve installed must comply with provisions of the standard described in ANSI® Z21.22 for the United States or CSA 4.4 in Canada.

5.5.1 Install Pressure Relief Valve Kit R0336101

For ASME heater models JXi400NC, JXi400PC, JXi260NC and JXi260PC please go to Section 13, Appendix A. ASME Header.

Early models of JXi heaters utilized a different header design that currently used in production, so this heater may have one of two different header design. See *Figure 14* below to identify which header design you have. The header type installed on your JXi heater will determine which parts form this kit are used. Please double check that you have all necessary parts to complete the installation and that all parts are damage free. If any parts are missing or damaged please call 1.800.822.7933 for assistance.



Item	Description	Header Type	
		A	B
1	Pressure Relief Valve 3/4 in X 3/4 in 50 PSI	X	X
2	Brass Nipple 3/8 in	X	
3	Reducer Bushing 3/8 in M to 3/4 in F NPT	X	
4	Brass Nipple 3/8 in		X
5	Elbow 90° 3/4 in NPT Brass	X	X
6	PTFE (Teflon™) Tape	X	X

Table 5. Pressure Relief Valve Kit Components/Usage

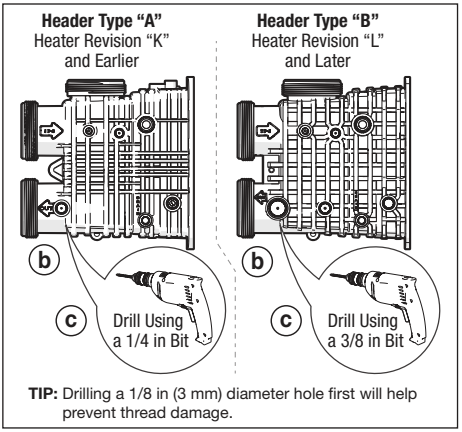
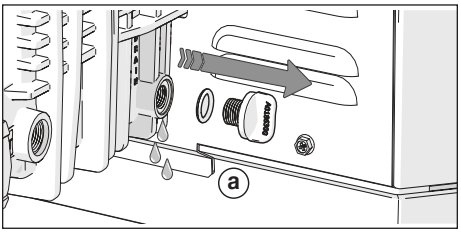


Figure 14. Identifying Header Design

- Turn off the electrical power to the heater.
- Turn off the main gas supply to the heater.
- If the heater has been operating, ensure you allow enough time for remaining water in the heat exchanger to cool down before beginning. It is recommended that protective gloves be worn during the entire procedure.
- Make sure the filter pump is off and will remain off for the duration of the installation procedure.
- If the heater is below the surface level of the water in the pool or spa, close all shut-off valves between the heater and the pool.

⚠ CAUTION

Use PTFE (Teflon) tape only on the threads of the pipe nipple attachment to the plastic header. Do not use pipe compound or pipe dope on threads or any part that comes into contact with the plastic header. These compounds may damage the header over a period of time.



a. Remove drain plug from header and allow all water to drain from heat exchanger.

b. Locate the threaded boss on the outlet port of the header, and find the dimple at the center.

c. Use the dimple to center the drill bit.

For header type A: Drill a 1/4 in (6.4 mm) diameter hole through the boss.

For header type B: Drill a 3/8 in (9.5 mm) diameter hole through the boss.

Take care not to damage the plastic threads.

TIP: Drilling a 1/8 in (3 mm) diameter hole first will help prevent thread damage.

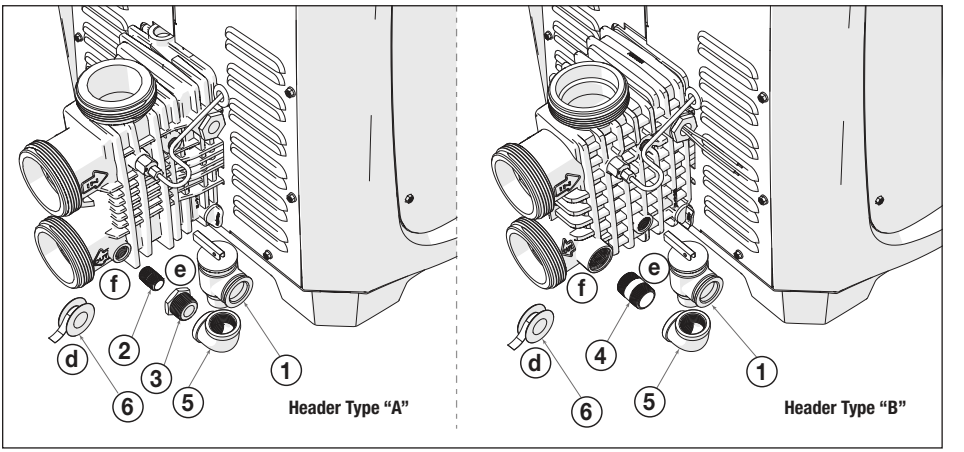
d. Each male connection should be first wrapped in 5-6 turns of PTFE (Teflon) tape.

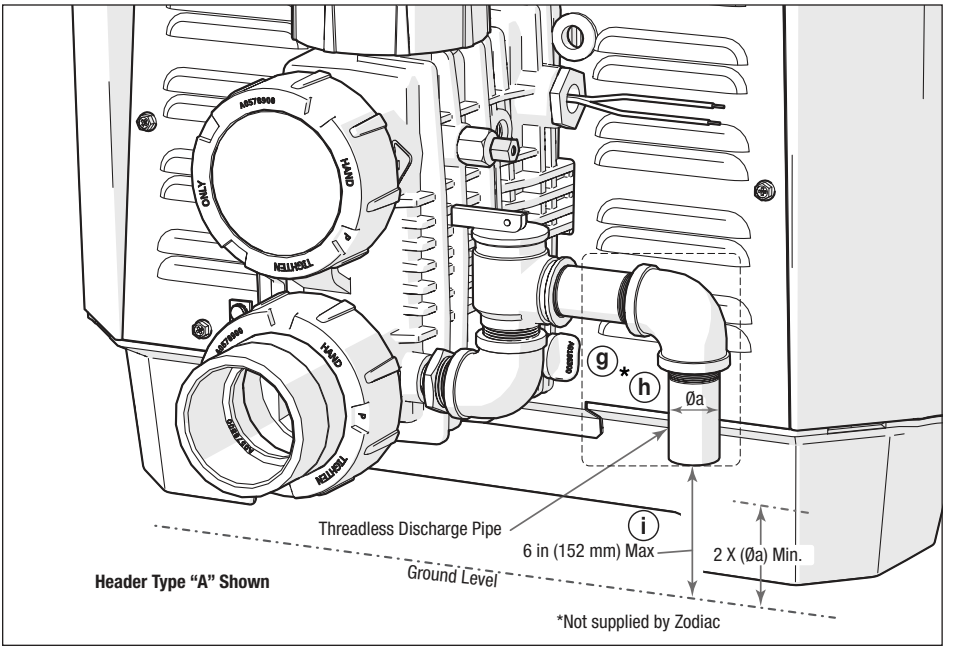
e. For header type A: Assemble the 3/8 in threaded nipple, reducing bushing, elbow and pressure relief valve. Make sure to get a sung fit. Do not overtighten.

For header type B: Assemble the 3/4 in threaded nipple, elbow and pressure relief valve. Make sure to get a sung fit. Do not overtighten.

f. Install the pressure relief valve assembly at the heater header. Make sure to get a sung fit. Do not overtighten.

g. The final orientation of the pressure relief valve should be vertically aligned with the discharge opening facing away from the heater header.





NOTE: Hardware showing in dotted line is not provided by Zodiac. Pressure Relief Valve hardware is provided on ASME heater models only.

h. Install a discharge pipe from the pressure relief valve discharge opening to a safe area. This is a precaution to prevent the possibility of personal injury or property damage in the event scalding water is discharged from the pressure relief valve.

i. Install the discharge pipe so that there is no trapped or standing water in the piping. Discharge piping must be facing down, terminating with a threadless nipple, no more than 6 in (152 mm) and no less than twice the diameter of the discharge pipe from the floor or drain/receptor.

- Discharge piping must be open with no reducers or shut-off valves or other restrictions.
- Discharge piping must be positioned so that any discharged water will have an appropriate drain or run-off path away from the heater and other pool equipment.
- To ensure the continued proper operation of the pressure relief valve, the valve should be tested once a year. To test, lift the lever with the circulation system running to ensure that water will pass through. When the lever is down, there should be no leaks from the outlet.

5.6 Auxiliary Components, Chlorinators, Ozone Generators and Sanitizing Chemicals

The JXi heater is manufactured with materials that are not compatible with high concentrations of ozone, chlorine, bromine, or other sanitizing chemicals. Heater damage caused by improper water chemistry or plumbing configurations are not covered by the Zodiac Pool Systems LLC warranty. All questions should be directed to technical support at 1.800.822.7933. Additional information can be found at www.jandy.com. Be sure to adhere to the following:

- All sanitation equipment, including chemical feeders and ozone generators, will need to be installed as the last piece of equipment in the pool circulation system.
- A chemically resistant check valve will also need to be installed between the sanitation equipment and the heater to prevent back-flow of high concentration of sanitizer from entering the heater.
- Wire any electrical sanitation equipment so that it cannot operate unless the filter pump is running.
- Always follow pool chemical manufacturer's instructions when adding chemicals to pool.

Section 6. Electrical Connections

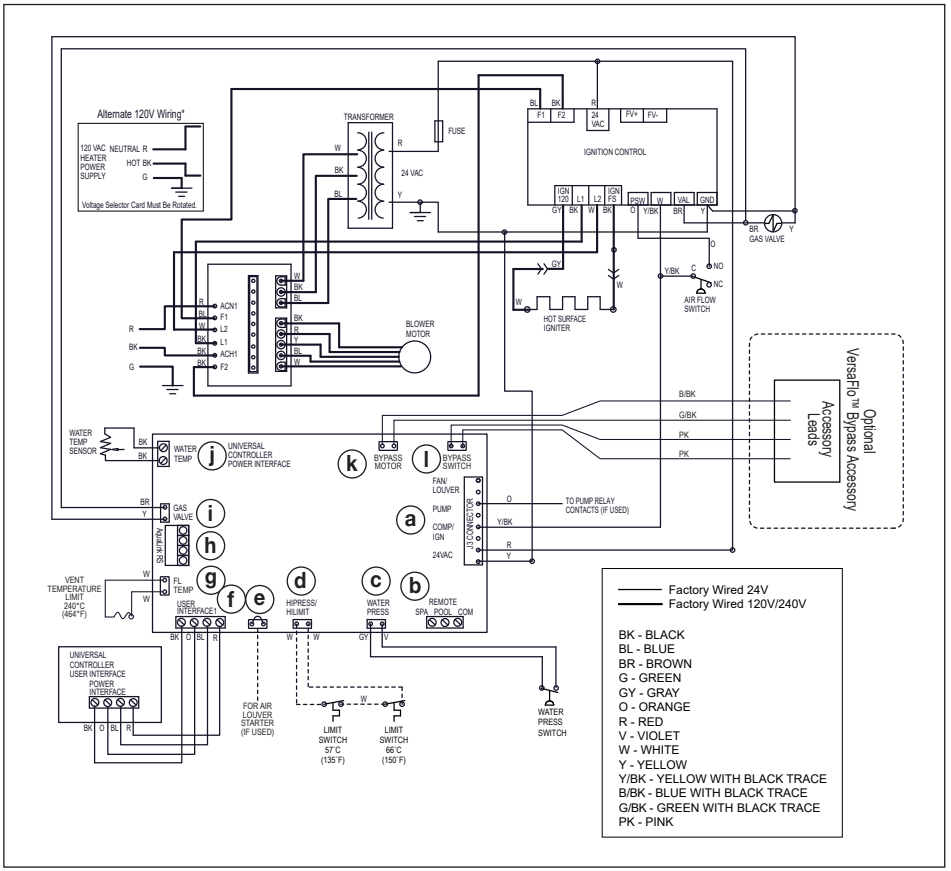


Figure 15. JXi Connections / Schematic Wiring Diagram

Wiring connections must be made exactly as shown in the wiring diagram found on the inside of the heater door. The NEC and CEC also require that the equipment and/or appliances associated with the pool water circulating system, including, but not limited to, pump motors and heaters, be bonded together as part of the equipotential bonding grid. Zodiac Pool Systems LLC provides a special labeled bonding lug on the manifold side of the heater to accommodate this requirement.

All electrical connections and wiring must be done by a certified electrician only. Electrical wiring must also be in accordance with the latest edition of the National Electrical Code® (NEC®), ANSI®/National Fire

Protection Association® (NFPA®) 70, or in Canada, the Canadian Electrical Code (CSA® C22.1) unless local code requirements indicate otherwise.

The heater comes factory-wired for installation with 240 Volt, 60 Hz AC field electrical supply. If the use of 120 Volt, 60 Hz AC field electrical supply is required, You must first change the position of the voltage selector board on the power distribution board. See *Section 6.3, Input Voltage and Conversion* for details.

⚠ WARNING

ELECTRICAL SHOCK HAZARD. This heater contains wiring that carries high voltage. Contact with these wires may result in severe injury or death.

⚠ CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

Verify proper operation after servicing.

6.1 Service Access

- Remove the four screws holding the front heater panel in place to expose the raceway.
  - **a.** Locate the raceway lock release on the interior of the heater raceway.
  - **b.** Using a screwdriver or comparable tool; press into the raceway release orifice until the raceway latch releases, and the raceway swings free.
  - **c.** Secure the raceway in place by lifting until the locking latch engages.
  - **d.** Push the tab on the locking latch to the left to release.
- Press raceway down and back until an audible click indicates that it is latched in position.
  - Replace heater front panel.

TECH TIP: For greater access remove the top panel by removing the 4 black screws on the outside of the heater.

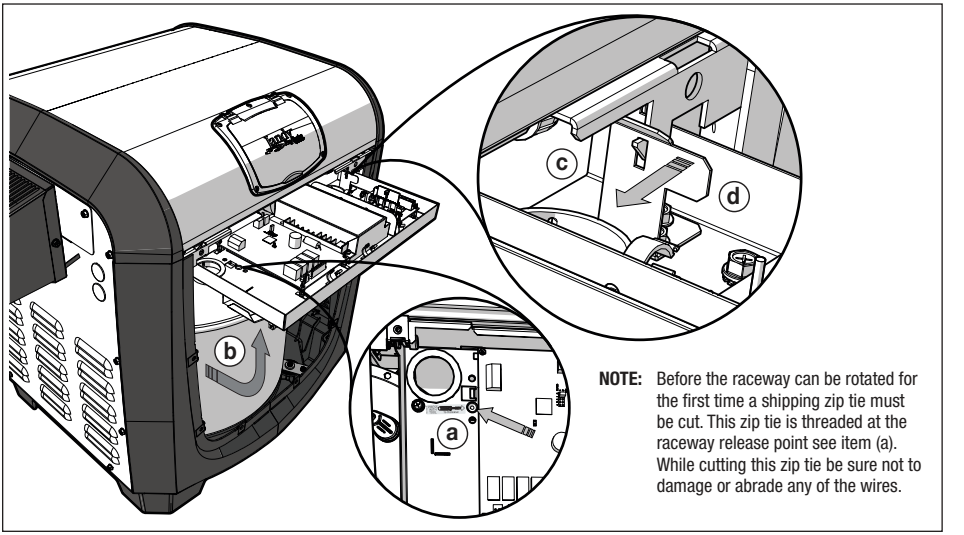
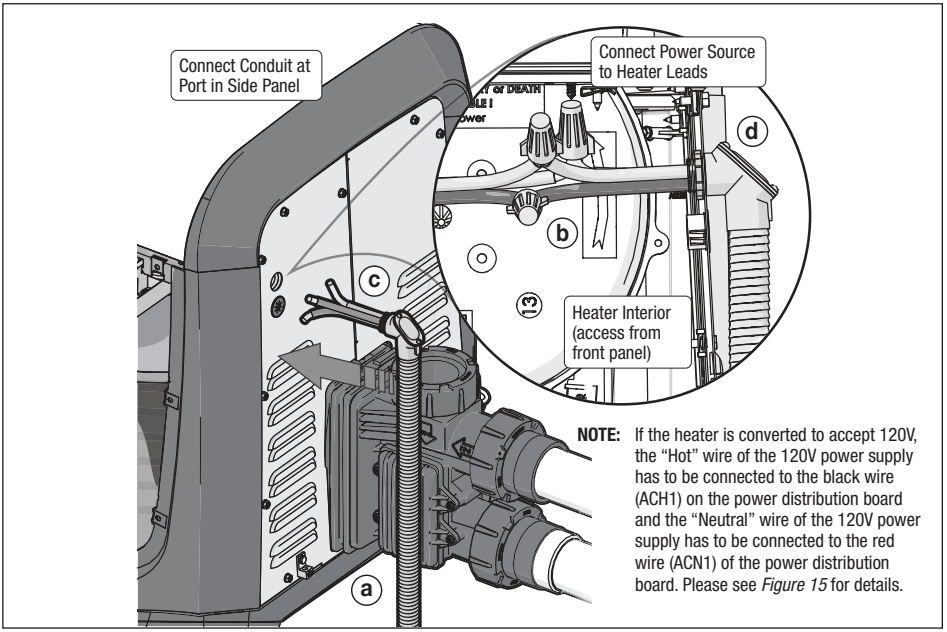


Figure 16. Raceway Rotation for Service Access

6.2 Main Wiring Connections

The main wiring connections should be available externally to the heater at the time it is unpacked. Use flexible conduit to run the main power lines from the power source to the heater connections. No external junction box is required.

- Ensure that all electrical power is shut off to the heater at the breaker.
- Ensure that the filter pump is off and will stay off for the remainder of the procedure.
- Follow applicable service access instructions from *Section 6.1, Service Access*.
  - **a.** Run conduit and power lines from main power source to the heater side panel.
  - **b.** Make wire connections via wire nuts.
  - **c.** Push wire connections through the knockout into the heater body. Be careful not to damage or abrade any wiring during this procedure.
  - **d.** Secure the conduit to the heater body panel at the knockout using a suitable conduit connector or elbow.



NOTE: If the heater is converted to accept 120V, the "Hot" wire of the 120V power supply has to be connected to the black wire (ACH1) on the power distribution board and the "Neutral" wire of the 120V power supply has to be connected to the red wire (ACN1) of the power distribution board. Please see *Figure 15* for details.

Figure 17. Main Wiring Connections

Maintenance Disconnect Means - The National Electrical Code® (NEC®) requires one or more means to simultaneously disconnect all ungrounded conductors to be provided for all utilization equipment other than lighting. Each means shall be readily accessible and within sight from its equipment and shall be located at least 1.5 m (5 ft) horizontally from the inside walls of a pool or spa unless separated from the open water by a permanently installed barrier that provides a 1.5 m (5 ft) reach path or greater.

GFCI Protection - Circuits serving gas-fired swimming pool and spa water heaters operating at voltages above the low-voltage contact limit per NEC® shall be provided with GFCI protection.

Canadian Electrical Code requires GFCI protection for all equipment located within 3 m of the inside walls of a pool or spa, unless separated from the pool or spa area by a fence, wall, or other permanent barrier.

6.3 Input Voltage and Conversion

The heater comes factory-wired for installation with 240 Volt, 60 Hz AC field electrical supply. If the use of 120 Volt, 60 Hz AC field electrical supply is required, You must first change the position of the voltage selector board on the power distribution board. See *Figure 18*.

- Ensure that all electrical power is shut off to the heater at the breaker.
- Ensure that the filter pump is off and will stay off for the remainder of the procedure.
- Follow service access instructions from *Section 6.1, Service Access*.

a. Locate the power distribution board in the lower right hand section of the raceway.

b. Using scissors, clip the zip tie securing the voltage selector board into the power distribution board.

c. Remove and rotate the voltage selector board 180°. The printed message "FOR 120 VAC" will be displayed above the card connection pins.

d. Reinstall voltage selector board.

NOTE: The voltage selector board is keyed so that it will fit in only one direction for either selected voltage (either side of the board).

⚠ WARNING

ELECTRICAL SHOCK HAZARD. To avoid an electrical shock hazard, which can result in serious injury or death, ensure that all electrical power to the system is turned off before approaching, inspecting, or troubleshooting any leaking plumbing that may have caused electrical devices in the surrounding area to get wet.

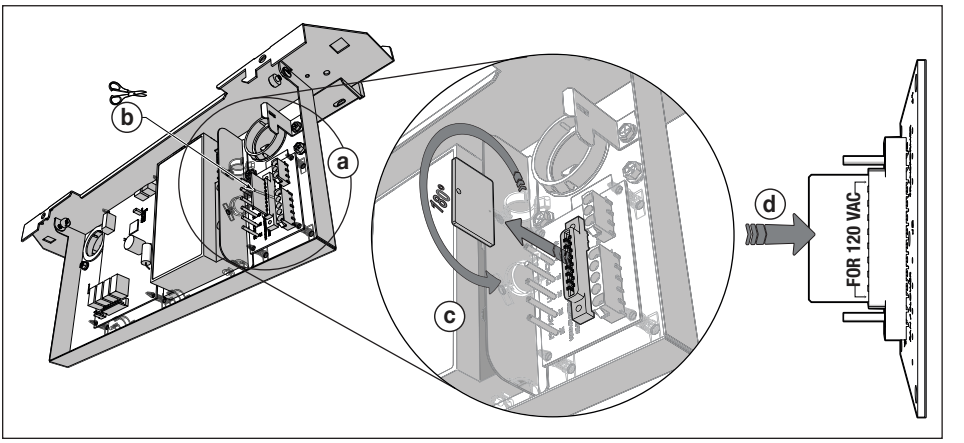


Figure 18. Input Conversion Process

6.4 Bonding

In the United States the National Electrical Code® (NEC®) and in Canada the Canadian Electrical Code (CEC), require that all metallic components of a pool structure, including reinforcing steel, metal fittings and above ground components be bonded together (forming an equipotential bonding grid) with a solid copper conductor not smaller than an 8 AWG (6 AWG in Canada).

Additionally, Zodiac Pool Systems LLC, requires that the appliance be connected to a bonding loop that includes all electrical equipment in the system and on the equipment pad. Bonding lugs must be connected with a solid copper wire at least 8 AWG (6 AWG in Canada) or larger. Failure to do so may void the Zodiac Pool Systems LLC warranty.

⚠ CAUTION

To prevent premature failure of the appliance resulting from stray voltages and voltage differentials, the heater must be bonded to other equipment which is part of the pool plumbing system with a solid copper wire not smaller in diameter than 8 AWG (6 AWG) in Canada).

National Electrical Code® (NEC®) requires bonding of the Pool Water. Where none of the bonded pool equipment, structures, or parts are in direct connection with the pool water; the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than 5800 mm^2 (9 in^2) of the surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities, and it shall be bonded in accordance with the bonding requirements of NEC Article 680. Refer to locally enforced codes for any additional bonding requirements.

Section 7. Optional Remote Controls

The JXi heater controls can be wired for remote operation. All Zodiac® AquaLink® Control Systems will permit the heater to be operated by remote control. The instructions in the following sections should be used as a general guideline only. Please follow the instructions that accompany your selected control system thoroughly.

If you are setting up a new pool or spa system, or if you have any questions about your heater control system, please call Jandy technical support at 1.800.822.7933.

Electrical wiring must be in accordance with the latest edition of the National Electrical Code (NEC), ANSI®/ National Fire Protection Association® (NFPA70®), unless local code requirements indicate otherwise.

Refer to *Figure 15* for a complete diagram of wiring connections and terminals.

Consult with Jandy Technical Support, 1.800.822.7933 for questions about installing non-Zodiac remote controls.

7.1 Connecting to Remote Pool-Off-Spa Selector (3-Wire Connection)

- Turn off the power to both the pool/spa control system and the heater unit.
- Follow service access instructions from *Section 6.1, Service Access*.
- Run the wires from the pool/spa control system through the low voltage knockout on the right or left hand side of the heater.
- Connect the wiring from the pool/spa control system to the heater remote control terminal. See *Figure 15* item “b”.
- Connect the three wires to the Spa, Pool & Common terminals of the J6 terminal bar.
- Reinstall front panel.

- Restore power to the heater and the pool/spa control system.

NOTE: When a fireman's switch is being utilized and "hi-lo-com" is selected, the heater will fire automatically when the contacts close even if the user interface on the heater is off.

7.1.1 Configure the Control Panel

- Make sure the pool heater is OFF.
- Press and hold MENU, then the POOL and SPA buttons for 5 seconds to access Service Setup mode.

NOTE: The display will revert back to OFF 1 minute after the last key press.

- Press Up or Down to display REMOTE.
- Press MENU, REMOTE OFF (default) is displayed.
- Use Up or Down to scroll through the Remote options until HI-LO-COM is displayed, then press MENU to select.
- Press POOL or SPA to exit Service Setup mode.

7.2 Connecting to an AquaLink Control System or Remote TSTAT (2-Wire Connection)

An interrupt (on/off-type) remote can be connected as a Remote TSTAT to turn the heater on or off but not perform any other function. When using this type of connection, remember to set the heater control to "POOL" or "SPA" and set the thermostat control to maximum.

NOTE: When a fireman's switch is being utilized and "hi-lo-com" is selected, the heater will fire automatically when the contacts close even if the user interface on the heater is off.

7.2.1 Install the Remote TSTAT

- Turn off the power to both the pool/spa control system and the heater unit.
- Follow service access instructions from *Section 6.1, Service Access*.
- Run the wires from the pool/spa control system through the low voltage knockout on the right or left hand side of the heater.
- Connect the wiring from the pool/spa control system to the heater remote control terminal.
- Connect the two wires to Pool and Common (not Spa) on the J6 terminal bar. See *Figure 15* item "b".
- Reinstall panel.
- Restore power to the heater and the pool/spa control system.

NOTE: If you install a time clock to control the filter pump operation, it is recommended that the time clock have its own low voltage (Fireman's) switch to turn off the heater before turning off the pump. The switch should shut off the heater about 15 minutes before the filter pump shuts off. This will allow for a more efficient operation by removing any residual heat contained in the heat exchanger back to the pool.

⚠ CAUTION

To avoid damage to the heater, do not connect the power supply of the heater to the output side of the clock if your time clock simply interrupts the high voltage power supply or has a high voltage output. Doing so will prevent the blower from purging the residual heat from the heater when the heater turns off. The blower must be allowed to run for 45 seconds after the heater shuts off.

7.2.2 Configure the Control Panel

- Make sure the pool heater is OFF.
- Press and hold MENU, then the POOL and SPA buttons for 5 seconds to access Service Setup mode.

NOTE: The display will revert back to OFF 1 minute after the last key press.

- Press MENU, REMOTE OFF (default) is displayed.
- Use Up or Down to scroll through the Remote options until REMOTE TSTAT is displayed, then press MENU to select.
- Press POOL or SPA to exit Service Setup mode.
- Press POOL or SPA to adjust the set point to the maximum 104°F (40°C).

7.3 "Smart" Communication via RS-485

To provide "smart" communication between the JXi and a power center board (PCB) (AquaLink® Infinity, AquaLink RS, AquaLink PDA, and AquaLink Z4) through a red four-pin RS485 connector, your PCB must have the appropriate firmware. To determine the REV of the AquaLink RS PCB firmware in your system, refer to *Table 6*. All AquaLink Infinity Firmware revisions are RS485 ready.

7.3.1 PCB and Firmware Identification for AquaLink RS and AquaLink PDA Connections

Components	Rev MMM or EARLIER	Rev N or LATER
RS485 Connectors	One set of four	Two sets of four
JVA Sockets 24 VAC	Located on top of board	Located on bottom of board
Relay Sockets 24 VDC	10 total sockets. Eight located on bottom, two on top of board	11 total sockets. All located on bottom of board.

Table 6. AquaLink RS Power Center Board Identification Features

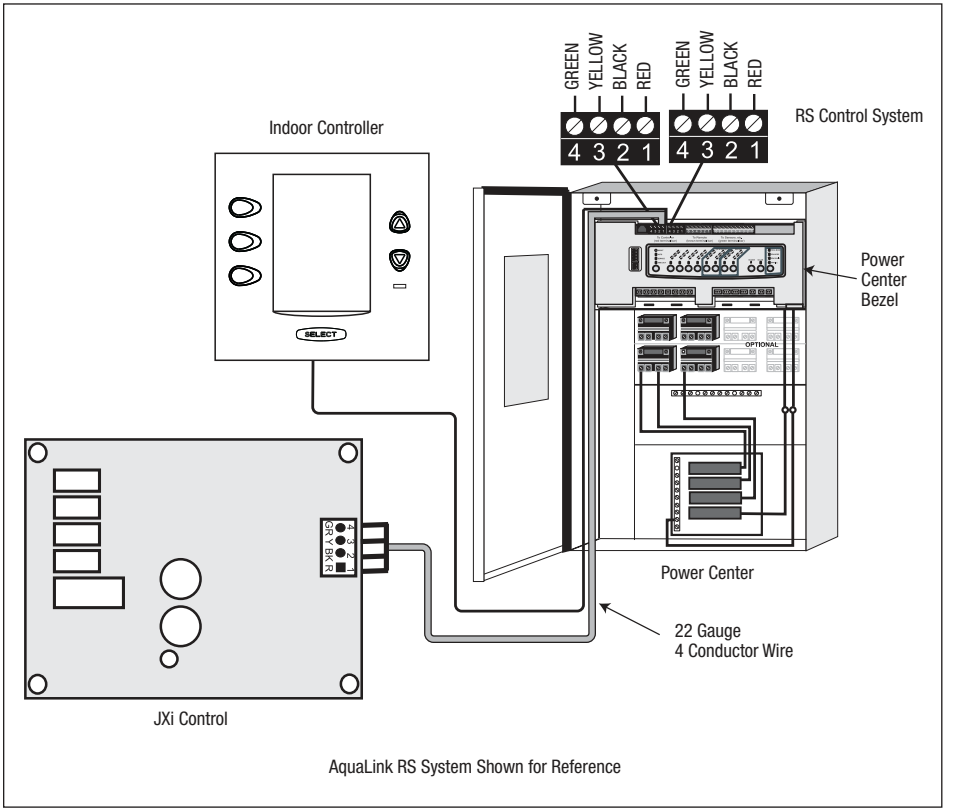


Figure 19. Wiring the JXi to a Zodiac® Remote

If your PCB firmware is REV MMM or earlier:

Connect via a 2-wire connection. See *Section 7.2, Connecting to an AquaLink Control System or Remote TSTAT (2-Wire Connection)* for details.

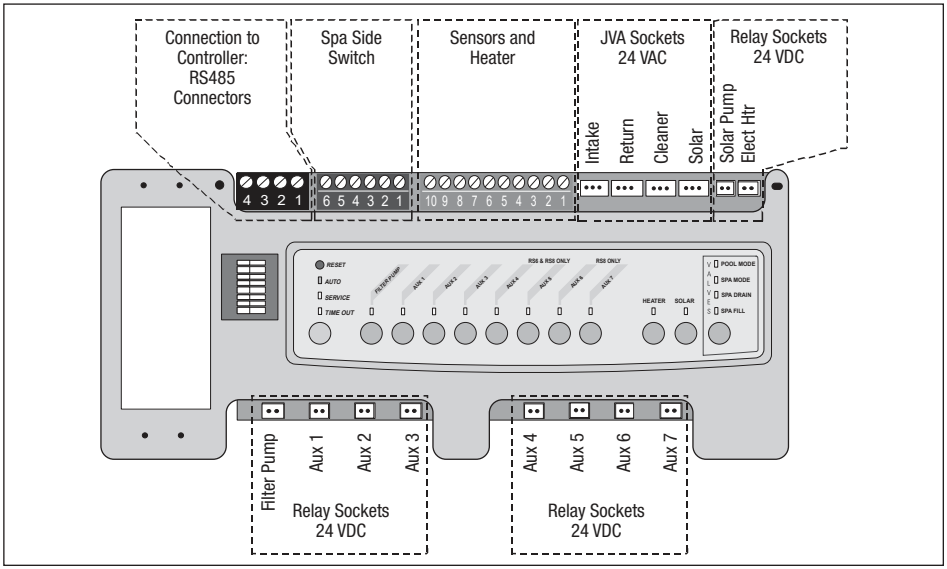


Figure 20. AquaLink RS PCB with Firmware Rev MMM or Lower

If your PCB firmware is REV N or higher:

Connect via RS485 connection. See *Section 7.3, "Smart" Communication via RS-485* for details.

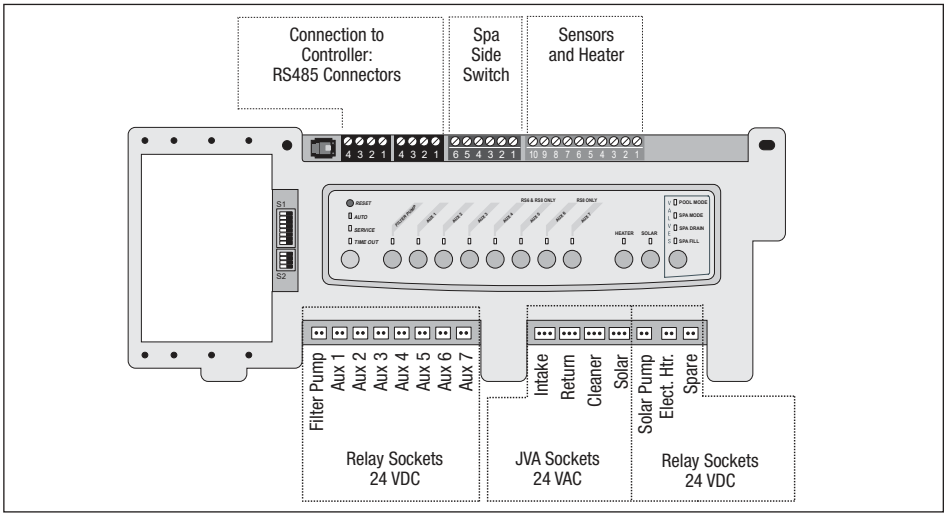


Figure 21. AquaLink RS PCB with Firmware Rev N or Higher

NOTE: Only an AquaLink® RS System with firmware revision "N", or higher, will support the heater interface. Refer to *Table 6* along with *Figure 20* and *Figure 21* to determine the REV of your system's firmware. If it is "N" or higher, continue with these procedures. If it is MMM or lower, follow the procedures in *Section 7.2, Connecting to an AquaLink Control System or Remote TSTAT (2-Wire Connection)* for connecting to a remote TSTAT.

NOTE: Only a PDA System with firmware revision 4.1, or higher, will support the heater interface.

7.3.2 RS-485 Connection Procedure

- Turn off the power to both the heater and the controller.
- Open the power center enclosure and remove the low voltage dead front.
- Use 22 gauge 4-conductor wire to run between the heater and the control system and match the wire color order. See *Figure 19*.
- The wires coming from the heater can be "doubled up" on the red RS485 terminal bar with the four wires from the indoor controller.
- Check all wiring, then apply power to both the heater and the control system. Verify operation in either Service or Auto mode. Refer to your Control System manual for operating instructions.

When the heater is connected to an external controller, all functionality of the heater control panel is disabled, therefore heater functions can be controlled only from the controller. Control can be restored to the local heater control panel by either disconnecting the red RS485 terminal or by entering the service setup mode selecting REMOTE then STANDALONE. Control can be sent back to the external controller by re-entering the service setup mode and selecting JANDY RS485, unplugging and replugging the RS485, or by cycling power to the heater with the RS485 connected.

Do not connect more than two (2) wires to any of the terminals in the Control System when connecting peripheral devices. If connecting the heater to the control system creates this situation, then a Multiplex PCB Kit, which includes the Multiplex Board (part # 6584) must be used. Call Jandy Technical Support at 1.800.822.7933 with any questions.

7.3.3 To Stop the Heater and Prevent Firing After Connecting to an External Controller

- Turn power to the heater ON. The heater display shows: **JANDY REMOTE ONLINE PUSH MENU TO DISABLE**.
- After pressing menu, the display will show **JANDY REMOTE OFFLINE PUSH MENU TO ENABLE**.

7.3.4 To Revert Heater Control Back to Local Heater User Interface

To revert the heater back to Standalone without disconnecting the RS-485:

- Make sure the pool heater is OFF.
- Press and hold MENU, then the POOL and SPA buttons for 5 seconds to access Service Setup mode.

NOTE: The display will revert back to OFF 1 minute after the last key press.

- Press Up or Down to display REMOTE.
- Press MENU, REMOTE OFF (default) is displayed.
- Use Up or Down to scroll through the Remote options until STANDALONE is displayed, then press MENU to select.
- Press POOL or SPA to exit Service Setup mode.

Section 8. Operating Instructions

Follow the instructions outlined below to start the heater. Refer to the Lighting and Shutdown Instructions label on the inside lid panel of the heater. See *Figure 23*.

All questions should be directed to technical support at 1.800.822.7933. Additional information can be found at www.jandy.com.

⚠ WARNING

If you do not follow the instructions below exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

8.1 Important Safety Instructions

READ BEFORE YOU START

- This appliance does not have a pilot light. It is equipped with an ignition device, which automatically lights the heater. Do NOT try to light the burners by hand.
- **BEFORE OPERATING**, smell all around the appliance for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

8.1.1 What To Do If You Smell Gas

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Use only your hand to switch on or off the gas control switch. Never use tools.
- If the gas control switch appears broken or will not move, don't try to repair it, call a qualified service technician. Force or attempted repair may result in fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system which has been under water.

8.2 First-Time Start-Up Procedure

⚠ WARNING

Vent pipes and heater tops get hot! These surfaces can cause serious burns. Do not touch these surfaces while the heater is in operation.

Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and replace any part of the control system and any gas control which has been under water.

Should overheating occur or the gas supply fail to shut off, turn off the manual gas control valve to the heater.

Do not attempt repairs on the gas controls or appliance. Tampering is dangerous and voids all warranties.

- Confirm that pool water is flowing normally through the pool system and equipment.
- If it is a new pool or spa installation, operate the filter pump with the heater off long enough to completely clean the water. This will remove any installation residue from the water.
- Clean the filter before starting the heater.
- Start the heater in either Pool or Spa mode. See *Figure 23*.
- Start the heater. See *Figure 23*.
- When the heater starts, confirm there is adequate water flow. See *Section 5, Water Connections* for details.

8.2.1 Operating Instructions

Refer to the Lighting and Shutdown Instructions. See *Figure 23* located inside the top panel.

- STOP! Read IMPORTANT SAFETY INFORMATION in previous section.
- This appliance is equipped with an ignition device which automatically lights the heater. DO NOT try to light the burner by hand.
- Set temperature thermostat controls to their lowest setting and turn off the controller. Make sure the display shows GAS HEATER IS OFF.
- Turn off all electrical power to the heater at the junction box.
- Remove the heater rear or top panel.
- Toggle gas control switch to OFF position. See *Figure 22*.
- Wait five (5) minutes to clear out any gas, then smell for gas, including near the floor. **IF YOU SMELL GAS, STOP!** Follow instructions in *Section 8.1.1, What To Do If You Smell Gas*.
- If no gas is detected, toggle gas control switch to the ON position.
- Replace the rear panel or top.
- Turn on electrical power to the heater.
- Turn the controller ON by pressing POOL or SPA and set the temperatures as necessary.

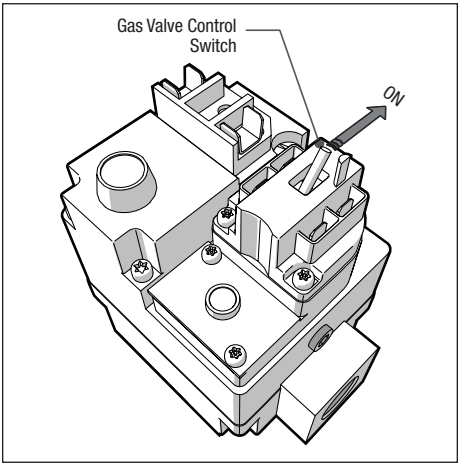


Figure 22. Gas Valve

NOTE: If the heater does not start, check that the filter pump is ON, the filter is clean and that water is flowing to the pool. If the heater still does not operate, follow the procedure in *Section 8.3, To Turn Off Gas to the Heater* to turn off gas supply to the heater.

⚠ WARNING

When the heater is fired for the first time, the combustion chamber refractory binder material is driven out by the heat of the flame. White smoke and/or sharp odors may be emitted from the vent during this period. Do not inhale combustion product fumes at any time, and especially when these fumes are being emitted. This “burn-in” period will last only a few minutes.

8.2.2 If Ignition Is Unsuccessful

If ignition is unsuccessful, or the flame fails during normal operation, the ignition control shuts off the gas valve. The heater will then go through a post purge process and attempt to establish stable combustion two additional times. If ignition is unsuccessful after three attempts, the system shuts down and will automatically attempt to restart after one hour.

- To reset the heater to provide three (3) attempts to start:
- Turn OFF the control then turn it back ON.
- Access either the Pool or Spa mode.

8.3 To Turn Off Gas to the Heater

- Set temperature thermostat controls to their lowest setting and turn off the controller. Make sure the display shows GAS HEATER IS OFF.
- Turn off all electrical power to the heater at the junction box.
- Remove the rear panel or top.
- Toggle gas control switch to OFF.
- Shut off the external gas supply valve to the heater.
- Replace the rear panel or top.

8.4 Normal Operation

During normal operation, the control system measures the temperature of the water flowing through the heater and will begin the start-up process if the temperature is below the set point. If the blower pressure switch senses adequate airflow when the blower starts, the ignition sequence begins. Following a pre purge, the igniter is energized, then the gas valve opens. As long as a flame is sensed at the burner, operation continues until the temperature of the water entering the heater reaches the temperature control setting.

FOR YOUR SAFETY READ BEFORE OPERATING

⚠ WARNING **If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury, or death.**

(A) This appliance does not have a pilot light. It is equipped with an ignition device which automatically lights the heater. Do NOT try to light the burners by hand.
(B) BEFORE OPERATING, smell all around the appliance for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

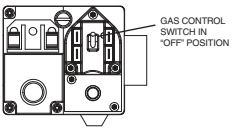
WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the Fire Department.

(C) Use only your hand to activate the gas control switch. Never use tools. If the switch will not move by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
(D) Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system which has been under water.

OPERATING INSTRUCTIONS

1. **STOP! Read the safety information above on this label.**
2. *** Set the thermostat to lowest setting and turn appliance switch to OFF.**
3. **Turn off all electric power to the appliance.**
4. **This appliance is equipped with an ignition device which automatically lights the heater. Do not try to light the burners by hand.**
5. **Remove the top panel.**
6. **Turn gas control switch to OFF position**
7. **Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.**
8. **Turn gas control switch to ON position.**
9. **Replace the top panel.**
10. **Turn on all electric power to appliance.**
11. *** Set thermostat to desired setting and switch appliance from OFF to either POOL or SPA.**
12. **If the appliance will not operate, check that the filter pump is on, the filter is clean and water is flowing to the pool. Otherwise, follow the instructions "To Turn Gas Off" and call your service technician or gas supplier.**



TO TURN GAS OFF

(1) Remove top panel.

(2) * Set the thermostat to lowest setting and switch appliance to OFF.

(3) Turn off all electrical power to the appliance if service is to be performed.

(4) Turn gas control switch to OFF positition.

(5) Replace top panel.

*** See manual for details of operation and thermostat control.**

Figure 23. Lighting and Shutdown Instructions Label on Top Panel (English)

8.5 Operating the Controller

Unless the heater is connected to a remote controller, all operations are set up and programmed through the control panel on the top of the heater. See *Figure 24*.

NOTE: The display light reverts to OFF after two minutes of inactivity since the last key was pressed.

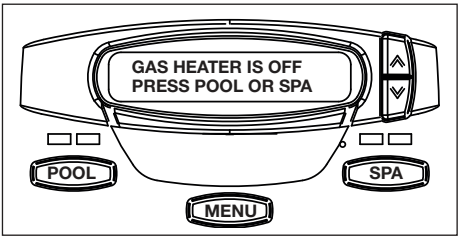


Figure 24. Main Control Panel